



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/603,595	06/26/00	LIM	D P56132

008439
ROBERT E. BUSHNELL
1522 K STREET NW
SUITE 300
WASHINGTON DC 20005-1202

MM92/0425

EXAMINER

LEE, S

ART UNIT	PAPER NUMBER
2852	7

DATE MAILED: 04/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/603,595

Applicant(s)

LIM, DEUK-SUNG

Examiner

Susan S. Lee

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2000 and 07 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892), 2 sheets.
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Art Unit: 2852

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because "comprises", page 25, line 2 should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

"detecting a paper jam" and "process for manufacturing an electro photo multifunction apparatus" do not have proper antecedent basis in the specification.

Art Unit: 2852

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, line 10, "a first" of what?

The term "improved removal" in claim 2, line 9; claim 9, line 10; and claim 13, line 10, renders the claim indefinite. It is not a positive limitation to an apparatus claim nor a method claim nor a process of making claim.

As to claim 9, lines 10 and 13, there are two periods. A claim should be written as one sentence.

Claims 9-12 are ambiguous since these claims recite both a product, the electro photo multi functional peripheral apparatus, and method of using or "providing" such an apparatus. MPEP sect. 2173.05(p) (II). *Ex parte Lyell*, 17 USPQ2d 1548. In addition, the "steps of providing" in claim 9 does not positively recite a process.

Claims 9-12 are rejected as unpatentable method claims because the structural limitations do not positively recite or effect the method limitations as claimed in lines 9-13 of claim 9. *Ex parte Pfeiffer*, 135 USPQ 31.

Art Unit: 2852

Claims 13-19 are ambiguous since these claims recite a process of manufacturing an electro photo multifunction apparatus by reciting “providing steps” without any positive steps delimiting how this apparatus is actually made (ie. molding, adhering, bonding, or welding, etc.).

Claims 13-19 are ambiguous since these claims recite a process of manufacturing an electro photo multi functional apparatus (process of making), the apparatus, and steps of providing the apparatus (process).

As to claim 15, line 1, “said paper feeding means” lack antecedent basis.

As to claim 15, lines 2-3, “the base member” lacks antecedent basis.

As to claim 15, line 4, “the cover plates” lack antecedent basis.

As to claim 17, line 1, “the guiding means” lack antecedent basis.

As to claim 17, line 2, “the base member” lacks antecedent basis.

As to claim 18, line 2, “the base member” lacks antecedent basis.

As to claim 19, lines 3-4, “the base member” lacks antecedent basis.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 9-12 are rejected under 35 U.S.C. 101 because the claims are directed to neither a “process” nor a “machine”, but rather embraces or overlaps two different statutory classes of

Art Unit: 2852

invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

8. Claims 13-19 are rejected under 35 U.S.C. 101 because the claims are not directed to a “process of making”, nor a “process”, nor a “machine”, but rather embraces or overlaps three different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Sasaki et al. (616).

Applicant's admitted prior art in the preamble discloses all elements of the apparatus except for the means for increasing expansibility of the optional auxiliary device, the means comprising a first [paper transport path], a second paper transport path, and a third paper transport path for discharging the sheets of recording paper which the feeding unit has fed.

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and

Art Unit: 2852

sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expasibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's admitted prior art in the preamble with that of Sasaki et al. in order to obtain a duplex copy or superimposed copy as disclosed by Sasaki et al. (Note abstract).

11. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Takahashi et al. (101) and Arai (828).

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expasibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

Sasaki et al. differs from the instant invention by not disclosing a feeding cassette mounted at a lower portion of the main body and the feeding unit is removable.

Art Unit: 2852

Takahashi et al. discloses using an optional large capacity feeder unit 6 and a paper feeding unit 4 that each has the same area as the area of both main body 1 and the second unit 3 that are located above the units 4 and 6. Note column 1, lines 31-47, column 2, lines 31-44, and Fig. 2.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor 33. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

Art Unit: 2852

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Takahashi et al. in order to expand supplies of paper to be copied without occupying more floor space.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Arai so that sheet jams can be more easily removed in an image forming apparatus.

12. Claims 2-5, 7, 13-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828).

Applicant's admitted prior art in the preamble discloses all elements of the apparatus, process, and process of making except for a feeding unit with a jammed paper removing means.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor ³²33. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam

Art Unit: 2852

has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus as disclosed in Applicant's admitted prior art (preamble - Jepson claim) with that of Arai so that sheet jams can be more easily removed in an image forming apparatus.

As to having two cover plates in claim 4, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use two upper conveyors or two cover plates, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

As to the linkage 34 reading on the instant invention's elastic member, it would have been an obvious matter of design choice to use a linkage 34 as described by Arai, since applicant has not disclosed that the elastic member solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a linkage between the two conveyors where the sheet is fed in between.

13. Claims 2-5, 7, 9-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828).

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and

Art Unit: 2852

sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expansibility of the sorter 57 comprises paths such as 144, 125, and $132_1 - 132_n$. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C_3 with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

Sasaki et al. fails to show detecting a paper jam and operating the jammed paper removing means in a manner such that the paper jam is removed.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor 33. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

Art Unit: 2852

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Arai so that sheet jams can be more easily removed in an image forming apparatus.

As to having two cover plates in claims 4 and 11, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use two upper conveyors or two cover plates, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

As to the linkage 34 reading on the instant invention's elastic member, it would have been an obvious matter of design choice to use a linkage 34 as described by Arai, since applicant has not disclosed that the elastic member solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a linkage between the two conveyors where the sheet is fed in between.

14. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) as applied to claims 2-5, 7, 13-16, and 18 above, and further in view of Yim (307).

Applicant's Admitted Prior Art (Preamble - Jepson Claim) as modified by Arai differ from the instant invention by not disclosing a pair of guiding rollers as the guiding means.

Yim discloses it is well know in the art to use rollers for guiding a drawer while the drawer is pushed in or pulled out of an apparatus. Note column 1, lines 46-54.

Art Unit: 2852

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai with that of Yim in order to further guide the feeding unit.

15. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828) as applied to claims 2-5, 7, 9-16, and 18 above, and further in view of Yim (307).

Sasaki et al. as modified by Arai differ from the instant invention by not disclosing a pair of guiding rollers as the guiding means.

Yim discloses it is well know in the art to use rollers for guiding a drawer while the drawer is pushed in or pulled out of an apparatus. Note column 1, lines 46-54.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. in view of Arai with that of Yim in order to further guide the feeding unit.

16. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) as applied to claims 2-5, 7, 13-16, and 18 above, and further in view of Mochimaru (299).

Applicant's Admitted Prior Art (Preamble - Jepson Claim) as modified by Arai (828) differ from the instant invention by not disclosing a plurality of position guiding means fixed to a rear side of the base member and a corresponding plurality of position guiding holes formed in an inner portion of the main body into which the position guiding members are respectively inserted.

Art Unit: 2852

Mochimaru discloses an image forming kit 20 that is loaded into the housing 10 of an image forming apparatus by positioning pins 52. Note column 3, lines 16-39 and Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) with that of Mochimaru so that the apparatus can be easily positioned within the image forming apparatus without difficulty.

17. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828) as applied to claims 2-5, 7, 9-16, and 18 above, and further in view of Mochimaru (299).

Sasaki et al. as modified by Arai differ from the instant invention by not disclosing a plurality of position guiding means fixed to a rear side of the base member and a corresponding plurality of position guiding holes formed in an inner portion of the main body into which the position guiding members are respectively inserted.

Mochimaru discloses an image forming kit 20 that is loaded into the housing 10 of an image forming apparatus by positioning pins 52. Note column 3, lines 16-39 and Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. as modified by Arai with that of Mochimaru so that the apparatus can be easily positioned within the image forming apparatus without difficulty. It is inherent in Mochimaru that the positioning pins are received in respective holes so that the removable apparatus can be securely positioned inside the image forming apparatus.


Art Unit: 2852

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hashimoto et al. (872), Hoshi et al. (552), Wada et al. (203), Kioka et al. (719), Takahashi et al. (274), Veeder (786), Ogata (567), Zaitzu et al. (991), and Watanabe (855) disclose art in image forming apparatuses.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Lee whose telephone number is (703)308-2138.

The fax number of this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.


S. Lee
Primary Examiner
Art Unit 2852
April 21, 2001